Statement of Basis - Narrative

NSR Permit

Type of Permit Action: Regular - Significant Revision

Facility: **Cowboy Central Delivery Point (CDP)**
Company: XTO Energy, Inc.
Permit No(s).: 7877-M1
Tempo/IDEA ID No.: 38481 - PRN20200001
Permit Writer: Vanessa Springer

Fee Tracking (not required for Title V)

Tracking	**NSR tracking entries completed:** [X] Yes [] No
	NSR tracking page attached to front cover of permit folder: [X] Yes [] No
	Paid Invoice Attached: [X] Yes [] No
	Balance Due Invoice Attached: [] Yes [X] No
	Invoice Comments: Invoice paid in full.

Permit Review	**Date to Enforcement:** N/A*	**Date of Enforcement Reply:** N/A
	Date to Applicant: Revised draft 09/16/2021	**Date of Applicant Reply:** Revised draft 09/16/2021
	Date to EPA: N/A	**Date of EPA Reply:** N/A
	Date to Supervisor: 1st draft to Melinda 2/9/2021, Revised draft 09/15/2021	

*Enforcement is not currently reviewing draft permits.

1.0 Plant Process Description:

The Cowboy Central Delivery Point (CDP) is a gas processing facility with oil and NGL stabilization. The facility will produce sales gas, Y-Grade NGL, and spec oil products. The Cowboy CDP will be built over multiple phases to reach a full processing capacity of 1.0 BCFD of Natural Gas, 600,000 BPD of Oil Stabilization and 190,000 BPD of NGL Stabilization. The overall facility will be designed to accommodate four (4) cryogenic (cryo) trains.

Natural Gas System

The Cowboy CDP gas handling system will be fed by natural gas gathering lines, delivering sweet natural gas to the facility. At the inlet of the facility, these pipelines will be routed to the inlet slug catcher where condensate is separated and routed to the NGL stabilizers to produce Y-Grade NGL product. Gas from the slug catcher will feed each of the four (4) cryo trains. Each cryo train will have a dedicated amine unit (AU1-AU4) to remove CO2 and a molecular sieve dehydration unit to remove water. The gas will first be treated using MDEA and piperazine in the amine unit to remove carbon dioxide from the gas streams. In the amine regeneration unit for each train, flash gas from the amine flash tank and amine still will be routed to a thermal oxidizer (TO1-TO4) to destroy hazardous air pollutants (HAPs) and volatile organic compounds (VOCs). In the molecular sieve dehydration units, molecular sieve beds are used to dehydrate the treated gas. The units are not point sources of emissions and therefore not included in Table 2-A. In this two-unit design, one unit operates in dehydration mode while the other operates in regeneration mode. Switching from dehydration to regeneration is done by use of automatic switching valves. As the dehydrated unit becomes saturated with water vapor, it is automatically switched to regeneration mode while the regeneration unit becomes active in dehydration mode. When

the beds require regeneration due to saturation, a fired regeneration gas heater (RHTR1-RHTR4) with a maximum heat input rate of 35.25 MMBtu/hr will be used to remove water from the mol sieve beds. Following dehydration, the dry gas is cooled and expanded in the cryo units before being boosted by electric drive residue compressor engines into the sales gas pipeline.

NGL System

Natural gas liquids (NGLs) are gathered from surrounding compressor stations and piped into the facility. These pipelines will be combined with the condensate dropout from the slug catcher. This combined liquid stream will be processed through a two-tower condensate stabilization system to produce a "Y-Grade" NGL and a 9 RVP stabilized spec oil. From the first stabilization tower, the overhead gas will be compressed using electric drive compressor engine and sent to the cryo trains, whereas the liquids will be sent to the second tower to produce Y-Grade NGL. The Y-Grade liquids from the second tower will be stored in pressurized bullets and pumped to the NGL sales pipeline. Any gas from the second tower is routed to the cryo trains. Note that the NGLs from the cryo trains will also be pumped to and exported via the same pipeline. The stabilized oil from the second tower will be pumped to the internal floating roof oil storage tanks (IFR1-IFR8), where it is combined with on-spec oil, then routed to the oil sales pipeline. Heat for the stabilization process is provided by eight (8) heaters, each with a maximum heat input rate of 58.93 MMBtu/hr (SHTR1-SHTR8).

Oil System

Oil from surrounding batteries will be routed through the oil inlet surge vessel, which provides initial phase separation of oil and water. Any free water dropout will be routed through a 1,000 bbl gunbarrel separator (GBS1). From GBS1, skimmed oil will be sent to the 500 bbl slop oil tank (OTK7) and the heavier water will be sent to 750 bbl produced water tanks (PWTK1-PWTK2). All tanks are gas blanketed. Slop oil will be pumped back to oil stabilization or trucked offsite. Produced water will be transported offsite via pipeline.

Under normal circumstances, the oil received at the CDP is sent directly from the inlet surge vessel to IFR1-IFR8 for temporary storage before transporting the oil offsite via pipeline. If the incoming oil RVP does not meet sales specifications, it is sent to the oil stabilization process. Following stabilization, on-spec oil product will be sent to IFR1-IFR8. For flexibility, the inlet oil may be blended with the oil stabilization product to create desired product. Flash gas from oil stabilization will be recompressed to liquid and routed to the NGL stabilizers.

Hot Oil System

Closed-loop natural gas-fired heater hot oil systems will be used to provide process heat to the NGL and oil stabilization packages, as well as the amine and the cryo units. The systems will be packaged units with fired heating, expansion vessel, pumps, and filtration. All NGL stabilizers will be served by a common hot oil loop operating with a 500°F supply temperature. All oil stabilizers will be served by a common hot oil loop. Supply to each oil/NGL stabilizer hot oil loop will be from 58.93 MMBtu/hr burner packages (SHTR1-SHTR8) and circulation pump skids, which can be set to run at either temperature. Each Amine/Cryo train will have its own dedicated hot oil loop served by a 94.54 MMBtu/hr burner package (CHTR1-CHTR4) and pump skid with expansion vessel.

Flare System

All automated vents and process reliefs will be routed to either the low pressure or high pressure headers for the dual-tip flare system, which consists of three dual-tip flares (FL1-FL3). The flares are permitted to manage pilot, purge, and process vessel SSM gas. Any gas that must be removed from the

system during an emergency would also be routed to FL1-FL3. Gas may be routed to one or all of the flares at any given time.

Combustor
A combustor (ECD1) is used collect and dispose of vapors emitted from GBS1, SOTK1, PWTK1-PWTK2, and SOTL.

Emergency Generators
The emergency generators for the CDP portion of the plant (GEN1-GEN4) will be used to power safety-sensitive equipment in the event of grid power outages.

2.0 Description of this Modification:

The facility is proposing the following modifications:

1) Add selective catalytic reduction to two (2) stabilization heaters and two (2) cryo heaters
2) Remove two stabilization heaters
3) Reduce size/capacity of four (4) future internal floating roof tanks from 250,000 bbl to 100,000 bbl
4) Add truck loading of slop oil
5) Increase stabilizer overhead and cryogenic blowdown startup, shutdown, and maintenance (SSM) emissions
6) Update speciation profiles for several sources
7) Update fugitive counts and apply NMED-approved emissions reductions
8) Update tank throughputs
9) Add four (4) emergency generators
10) Update equipment nomenclature and unit numbers
11) Add/show electric compressors that have NSPS OOOOa applicability
12) Consolidate MSS floating roof tank landings under general SSM related VOC emissions at a rate of 10 tons per year per NMAQB guidance
13) 10 TPY VOC malfunction emissions are being added to the permit
14) Increase flare purge gas flow rates.

3.0 Source Determination:

1. The emission sources evaluated include **Cowboy CDP facility.**

2. Single Source Analysis:

A. SIC Code: Do the facilities belong to the same industrial grouping (i.e., same two-digit SIC code grouping, or support activity)? **Yes**

B. Common Ownership or Control: Are the facilities under common ownership or control? **Yes**

C. Contiguous or Adjacent: Are the facilities located on one or more contiguous or adjacent properties? **Yes**

3. Is the source, as described in the application, the entire source for 20.2.70, 20.2.72, 20.2.73, or 20.2.74 NMAC applicability purposes? **Yes**

Note: ExxonMobil Pipeline Company (EMPCo) owns and will operate the Cowboy Pump Station, which is located directly adjacent to the Cowboy CDP. This source consists of electric pumps, a

small solvent tank, a sump, and fugitive components. Since the site operates under a different Standard Industrial Classification and is operated by a different company, EMPCo has filed a Notice of Intent (NOI) separately from the Cowboy CDP to be operated by XTO.

4.0 PSD Applicability:

Once a source is PSD major for any single pollutant, all other pollutants, other than non-attainment pollutants, must be evaluated against Table 20.2.74.502 Significant Emission Rate for applicability regardless if that pollutant is over the 100/250 tpy threshold per 20.2.74.200(d)(1), 74.302.A and 302.B NMAC. See Section A, PSD Applicability, of the 1990 Workshop Manual for details, but keep in mind that the regulation has changed since the guidance was published.

A. The source, as determined in 3.0 above, is **a minor source before and after this modification.**

In addition to the entire facility, two other potential nested PSD source categories (20.2.74.501 NMAC) were evaluated:

1) **Fossil fuel boilers (or combination thereof) totaling more than 250 MMBtu/hr heat input; and**
2) **Petroleum storage transfer units, total storage capacity over 300,000 barrels.**

No sources are PSD major.

B. The project emissions for this modification are **not significant.**
C. Netting **is not required (project is not significant).**
D. BACT is **not required for this modification (Minor Mod).**

5.0 History (In descending chronological order, showing NSR and TV): *The asterisk denotes the current active NSR and Title V permits that have not been superseded.

Permit Number	Issue Date	Action Type	Description of Action (Changes)
7877-M1	02/11/2022	NSR Significant Revision	Proposed modifications: 1) Add selective catalytic reduction to two (2) stabilization heaters and two (2) cryo heaters 2) Remove two stabilization heaters 3) Reduce size/capacity of four (4) future internal floating roof tanks from 250,000 bbl to 100,000 bbl 4) Add truck loading of slop oil 5) Increase stabilizer overhead and cryogenic blowdown startup, shutdown, and maintenance (SSM) emissions 6) Update speciation profiles for several sources 7) Update fugitive counts apply NMED-approved emissions reductions 8) Update tank throughputs 9) Add four (4) emergency generators 10) Update equipment nomenclature and unit numbers 11) Add/show electric compressors that have NSPS OOOOa applicability 12) Consolidate MSS floating roof tank landings under general SSM related VOC emissions at a rate of 10 tons per year per NMAQB guidance

			13) 10 TPY malfunction emissions are being added to the permit 14) Increase flare purge gas flow rates
7877-R1	11/07/2019	Administrative Revision	Corrected a typographical error – incorrect facility location.
7877	11/16/2018	NSR - New	New Permit - the function of the facility is to process natural gas and provide a central delivery point for crude oil. The emission sources include twelve (12) oil heaters, four (4) regeneration heaters, three (3) flares. Eight (8) hydrocarbon storage tanks, four (4) thermal oxidizers, four (4) amine units, haul road emissions, SSM emissions, tank combustor, and fugitive emissions.

6.0 Public Response/Concerns:

A comment and request for hearing were submitted via email by Jeremy Nichols, Climate and Energy Program Director for WildEarth Guardians, on Saturday, June 20, 2020.

A second 30-day comment period was initiated on February 23, 2021 and concluded on March 25, 2021. A comment and request for hearing were submitted via email by Matt Nykiel, Attorney for WildEarth Guardians, on March 25, 2021.

A hearing to address comments from WildEarth Guardians on this permit action (and 7 other XTO permits) took place on October 25-26, 2021. The Deputy Secretary granted issuance of the permits on February 11, 2022.

7.0 Compliance Testing:

There is no compliance testing history.

8.0 Startup and Shutdown:

A. If applicable, did the applicant indicate that a startup, shutdown, and emergency operational plan was developed in accordance with 20.2.70.300.D(5)(g) NMAC? **Yes**
B. If applicable, did the applicant indicate that a malfunction, startup, or shutdown operational plan was developed in accordance with 20.2.72.203.A.5 NMAC? **Yes**
C. Did the applicant indicate that a startup, shutdown, and scheduled maintenance plan was developed and implemented in accordance with 20.2.7.14.A and B NMAC? **Yes**
D. Does the facility have emissions due to routine or predictable startup, shutdown, and maintenance? If so, have all emissions from startup, shutdown, and scheduled maintenance operations been permitted? **Yes**

9.0 Compliance and Enforcement Status:

Mike Space confirmed via email May 20, 2020: "There are no outstanding notices of violation and no settlement agreement for which all actions have not been completed for the referenced facility."

10.0 Modeling:

Modeling was submitted by the applicant with the original application, revised 10/23/2020, and revised again 02/09/2021 to incorporate revisions made to the application during the review progress. Eric Peters completed the modeling review of the final (02/09/2021) modeling on 02/18/2021. His report concluded:

"This modeling analysis demonstrates that operation of the facility described in this report neither causes nor contributes to any exceedances of applicable air quality standards. The standards relevant at this facility are NAAQS for CO, NO2, PM10, PM2.5, and SO2; NMAAQS for CO, NO2, and SO2; and Class I and Class II PSD increments for NO2, PM10, PM2.5, and SO2."

11.0 State Regulatory Analysis(NMAC/AQCR):

STATE REGU-LATIONS Citation 20 NMAC	Title	Applies (Y/N)	Unit(s) or Facility	Justification:
2.1	General Provisions	Yes, Always	Entire Facility	The facility is subject to Title 20 Environmental Protection Chapter 2 Air Quality of the New Mexico Administrative Code so is subject to Part 1 General Provisions, Update to Section 116 of regulation for Significant figures & rounding. Applicable with no permitting requirements.
2.3	Ambient Air Quality Standards	Yes, NSR	Entire Facility	**NSR:** 20.2.3 NMAC is a SIP approved regulation that limits the maximum allowable concentration of Sulfur Compounds, Carbon Monoxide and Nitrogen Dioxide.
2.7	Excess Emissions	Yes, Always	Entire Facility	Applies to all facilities' sources
2.33	Gas Burning Equipment - Nitrogen Dioxide	No		This facility does not have new gas burning equipment having a heat input of greater than 1,000,000 million British Thermal Units per year per unit.
2.35	Natural Gas Processing Plant – Sulfur	No		This regulation could apply to existing (prior to July 1, 1974) or new (on or after July 1, 1974) natural gas processing plants that use a Sulfur Recovery Unit to reduce sulfur emissions. This regulation is not applicable because sulfur emissions from the plant are below the applicability thresholds established in the regulation.
2.36 & 2.37	Petroleum Refineries and Petroleum Processing Facilities		Entire Facility	**These regulations were repealed by the Environmental Improvement Board. If you had equipment subject to 20.2.37 NMAC before the repeal, your combustion emission sources are now subject to 20.2.61 NMAC.**
2.38	Hydrocarbon Storage Facilities	Yes	IFR1-8 SOTK1, GBS1, PWTK1-2	20.2.38 NMAC This regulation could apply to storage tanks at petroleum production facilities, processing facilities, tanks batteries, or hydrocarbon storage facilities. The tanks are subject to 109 and 112 due to throughput and storage capacity. IFR1-IFR8 are each equipped with a floating roof while SOTK1, GBS1, and PWTK1-2 are controlled using a combustor.

20.2.39 NMAC	Sulfur Recovery Plant - Sulfur			This regulation could apply to sulfur recovery plants that are not part of petroleum or natural gas processing facilities.
2.61	Smoke and Visible Emissions	Yes	SHTR1-8, CHTR1-4, RHTR1-4, FL1-3, ECD1, TO1-4, GEN1-4	This regulation that limits opacity to 20% applies to Stationary Combustion Equipment, such as engines, boilers, heaters, and flares unless your equipment is subject to another state regulation that limits particulate matter such as 20.2.19 NMAC (see 20.2.61.109 NMAC). **If equipment at your facility was subject to the repealed regulation 20.2.37 NMAC it is now subject to 20.2.61 NMAC.**
2.70	Operating Permits	Yes	Entire Facility	The source is a Title V Major Source as defined at 20.2.70.7 NMAC.
2.71	Operating Permit Fees	Yes	Entire Facility	Source is subject to 20.2.70 NMAC as cited at 20.2.71.109 NMAC.
2.72	Construction Permits	Yes	Entire Facility	NSR Permits are the applicable requirement, including 20.2.72 NMAC.
2.73	NOI & Emissions Inventory Requirements	Yes, Always	Entire Facility	Applicable to all facilities that require a permit. PER **>** 10 tpy for a regulated air contaminant.
2.74	Permits-Prevention of Significant Deterioration	No		The facility is PSD Minor. In addition to the entire facility-wide emissions, two other potential nested PSD source categories (20.2.74.501 NMAC) were evaluated: 1) Fossil fuel boilers (or combination thereof) totaling more than 250 MMBtu/hr heat input; and 2) Petroleum storage transfer units, total storage capacity over 300,000 barrels. No sources exceed PSD thresholds.
2.75	Construction Permit Fees	Yes	Entire Facility	This facility is subject to 20.2.72 NMAC
2.77	New Source Performance Standards	Yes	See Sources subject to 40 CFR 60	Applies to any stationary source constructing or modifying and which is subject to the requirements of 40 CFR Part 60.
2.78	Emissions Standards for HAPs	No		This regulation applies to all sources emitting hazardous air pollutants, which are subject to the requirements of 40 CFR Part 61.
2.79	Permits - Nonattainment Areas	No		This facility is not located in, not does it affect, a nonattainment area.
2.82	MACT Standards for Source Categories of HAPs	Yes	See sources subject to 40 CFR 63	This regulation applies to all sources emitting hazardous air pollutants, which are subject to the requirements of 40 CFR Part 63.

12.0 Federal Regulatory Analysis:

Federal Regulation	Title	Applies (Y/N)	Unit(s) or Facility	Comments
Air Programs Subchapter C (40 CFR 50)	National Primary and Secondary Ambient Air Quality Standards	Yes	Entire Facility	Independent of permit applicability; applies to all sources of emissions for which there is a Federal Ambient Air Quality Standard.
NSPS Subpart A (40 CFR 60)	General Provisions	Yes	See sources subject to a Subpart in 40 CFR 60	Applies if any other subpart applies.
40 CFR 60.40c, Subpart Dc	Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units	Yes	SHTR1-8, RHTR1-4, CHTR1-4	Applicable: facility has steam generating units for which construction, modification or reconstruction is commenced after June 9, 1989 and that have a maximum design heat input capacity of 29 MW or less, but greater than or equal to 2.9 MW. The heaters have an input rating greater than 10 MMBtu/hr and are subject per §60.40c(a). Since the units burn only natural gas, there are no applicable control, monitoring, or reporting requirements. Fuel use records are required per §60.48c(g).
40 CFR 60, Subpart Kb	Standards of Performance for Storage Vessels for Volatile Organic Liquid Storage Vessels for Which Construction, Reconstruction, or Modification Commenced **After** July 23, 1984	Yes	IFR1-IFR8	The facility has storage vessels each with storage capacity greater than 75m^3 that are used to store volatile organic liquids and for which construction, reconstruction, or modification commenced after 7/23/84. The hydrocarbons are stored prior to custody transfer but the storage volume is equal to 1,589,875 m^3 so the exemption in §60.110b(d) no longer applies. The tanks use internal floating roof tanks to comply with the control requirements.
40 CFR 60, Subpart KKK	Standards of Performance for Equipment Leaks of VOC from Onshore Natural Gas Processing Plants	No		Facility constructed after 8/23/2011.
40 CFR Part 60 Subpart LLL	Standards of Performance for Onshore Natural Gas Processing: SO2 Emissions	No		Facility constructed after 8/23/2011.
40 CFR Part 60 Subpart JJJJ (Quad -J)	Standards of Performance for Stationary Spark. Ignition Internal Combustion Engines	Yes	GEN1-4	Units GEN1-4 are subject per 60.4230(a)(4)(iv). They must meet the definition of emergency engine at 60.4248 and comply with the requirements in in 60.4243(d) in order to be considered emergency stationary RICE. These units are NSR exempt. Per request from the Permittee, the units are included in the NSR permit so

Federal Regulation	Title	Applies (Y/N)	Unit(s) or Facility	Comments
				there will be consistency with the TV. Link to regulation – read more
NSPS 40 CFR Part 60 Subpart OOOOa	Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After September 18, 2015	Yes	FUG, EOOSCOMP1-7, ECOSCOMP1-7, ERESCOMP1-18, AU1-4	The reciprocating compressors (EOOSCOMP1-7, ECOSCOMP1-7, and ERESCOMP1-18) used for oil stabilization gas, condensate stabilization gas, and residue gas air are subject to rule per from §60.5365a(c). The site will be subject to leak monitoring from fugitive components per §60.5365a(f) for natural gas processing facilities. Since the sweetening units (AU1-4) process less than 2 lt/d of sulfur, per 60.5365a(g)(3) these units are required to comply with 60.5423a(c) but are not required to comply with 60.5405a through 60.5407a, 60.5410a(g), or 60.5415a(g). All storage tanks were constructed after the applicability date of the rule; however, since emissions will be limited by permit to less than 6 tpy, all tanks except IFR5-IFR 8 are exempt per §60.5365a(e). IFR5-IFR8 comply with NSPS Kb to comply with NSPS OOOOa. The electric drive centrifugal compressors for regen gas are exempt from §60.5365a(b) since they all use dry seals. The electric drive screw compressors for the refrigeration gas and instrument air are exempt from the definition of centrifugal compressor per §60.5430a. These compressors are not emissions sources in Table 2-A.
NESHAP Subpart A (40 CFR 61)	General Provisions	No	See sources subject to a Subpart in 40 CFR 61	Applies if any other subpart applies.
MACT Subpart A (40 CFR 63)	General Provisions	Yes	See sources subject to a Subpart in 40 CFR 63	Applies if any other subpart applies.

Federal Regulation	Title	Applies (Y/N)	Unit(s) or Facility	Comments
40 CFR 63.760 Subpart HH	Oil and Natural Gas Production Facilities –	No		AREA SOURCE (Minor for HAPs): 1) The facility contains no affected sources (TEG glycol dehydrators, 63.760(b)(2)). Dehydration is accomplished using molecular sieves.
40 CFR 63 Subpart ZZZZ (Quad Z)	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE MACT)	Yes	GEN 1-4	Per §63.6585(e), the generators must meet the emergency RICE definition in §63.6675 and the operating limitation in §63.6640(f). No other requirements apply.
40 CFR 63 Subpart JJJJJJ (6-Js)	National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources	No		Not subject to MACT 6-J per 63.11195(e) since these units are gas-fired boilers as defined.
40 CFR 64	Compliance Assurance Monitoring	Yes		Units AU1-4 and SOTK1 are equipped with a control device and the uncontrolled emissions are above the Title V major source thresholds. CAM Plans for these units are required in the initial TV permit application submittal.
40 CFR 68	Chemical Accident Prevention	No		The facility does not have more than a threshold quantity of a regulated substance in a process, as determined under §68.115 Threshold determination and 68.130. NSR & TV permits should include citation in applicability table in the permit, but no other specific permit conditions are required for NSR permits or TV permits. This is because the TV permit template includes a General Condition meeting the requirement of 68.215.
40 CFR 70	Title V- State Operating Permit Programs	No		Operating Permit Program – is not applicable – New Mexico State has full delegated authority and Title V is administered under 20.2.70 NMAC.
Title VI – 40 CFR 82	Protection of Stratospheric Ozone	No		The regulation is not applicable per §40 CFR Part 82.1(a) because the facility does not service, maintain or repair class I or class II appliances.

13.0 <u>Exempt and/or Insignificant Equipment that do not require monitoring</u>:

Unit Number	Source Description	Manufacturer	List Specific 20.2.72.202 NMAC Exemption (e.g. 20.2.72.202.B.5)	Date of Manufacture /Reconstruction[2]

			Insignificant Activity citation (e.g. IA List Item #1.a)	Date of Installation /Construction[2]
FFT	1000 bbl Firefighting Foam Tank	TBD	20.2.72.202.B.5	TBD
			Units with PTE < 0.5 tpy	TBD
48A	1000 bbl Raw Water Tank	TBD	20.2.72.202.B.5	TBD
			Units with PTE < 0.5 tpy	TBD
48B	1000 bbl Raw Water Tank	TBD	20.2.72.202.B.5	TBD
			Units with PTE < 0.5 tpy	TBD
49	1000 bbl Demineralized Water Tank	TBD	20.2.72.202.B.5	TBD
			Units with PTE < 0.5 tpy	TBD
50	Amine Makeup Tank	TBD	20.2.72.202.B.5	TBD
			Units with PTE < 0.5 tpy	TBD
51A	100 bbl Lube Oil Make-Up Tank	TBD	20.2.72.202.B.5	TBD
			Units with PTE < 0.5 tpy	TBD
51B	100 bbl Lube Oil Make-Up Tank	TBD	20.2.72.202.B.5	TBD
			Units with PTE < 0.5 tpy	TBD
55	Utility Water Tank	TBD	20.2.72.202.B.5	TBD
			Units with PTE < 0.5 tpy	TBD
VTank01	Varsol Tank	TBD	20.2.72.202.B.5	TBD
			Units with PTE < 0.5 tpy	TBD

14.0 **New/Modified/Unique Conditions** (Format: Condition#: Explanation):

A. Date of monitoring protocols used for:
- Heaters: May 28, 2009
- Glycol Dehydrators: September 22, 2010
- Engines: March 6, 2015
- Flares: July 12, 2017 (regulatory) and February 12, 2018 (emissions)

B. Table 106.A: Emissions from amine units AU1-AU4 for pollutants other than VOCs changed from “0.0” to “-” since no uncontrolled or controlled emissions from those pollutants are expected. The footnote describing how the “<” symbol is used was also revised to match the current permit template language.

C. Table A107.A revised to match the updated flare/SSM situation at the facility. An emission limit of zero for every pollutant was added for inlet gas flaring, since any inlet gas flaring would need to be reported as an excess emission. A footnote was added to the table to clarify the tank SSM activities (Unit SSM).

D. Condition A107.C was developed to include more stringent monitoring and recordkeeping for floating roof tank SSM emissions. The condition requires an annual inlet oil analysis and annual emissions calculations to verify compliance with the tank SSM emission limits (Unit SSM).

E. Condition A107.D inlet gas flaring revised. No emissions limit for inlet gas flaring has been requested by the applicant. Any inlet gas flaring would be reported as excess emissions.
F. Condition A107.E SSM Flaring: Requirement updated so that the permittee shall calculate the total tpy SSM emission rates as a daily rolling 12-month total, not a monthly total. Upper AQB management determined this wording and frequency is more appropriate.
G. Condition A107.F Malfunction Emissions: Added to the permit because 10 tpy Malfunction emissions are being incorporated with this permit action.
H. A108.B: Facility Inlet Flowrate Limit: Added to the permit. This condition is being added to all gas processing plants.
I. Engine conditions for Units GEN1-4 added (these units are NSR exempt but applicants requested the conditions be added for consistency with a future TV Permit):
    - A201.A: Hours of Operation
    - A201.B: 40 CFR 60 Subpart JJJJ
    - A201.C: 40 CFR 63 Subpart ZZZZ
J. Condition 203.C. corrected unit numbers for tanks
K. Condition A203.D Truck Loading – Condensate Loadout: This condition is being added with the addition of condensate loading in this permit action.
L. Condition A203.E Tank Throughput and Separator Pressure (Units GBS-1, PWTK1-2, and SOTK1) added to the permit, per AQB monitoring protocols for tanks with flashing emissions.
M. Combustor (Unit ECD1) conditions moved to Section A203, and revised:
    - A203.F Combustor Flame & Visible Emissions – In previous NSR permit 7877 this condition was A206.F, in which opacity requirements were combined with other operational requirements. This condition was separated into two conditions and revised, in order to match current monitoring protocols. The condition was also revised to allow flexibility of either a piezoelectric lighter or a continuously lit pilot, per applicant request.
    - A203.G Tank & Loading Control and Combustor Operation – Again, In NSR 7877 this condition was A206.F and combined with opacity requirements. The control/operation requirements were separated into this condition, and the monitoring/recordkeeping requirements have been slightly revised/clarified.
N. Condition A204.C Control Devices – SCR Catalysts: Added this condition since catalysts are being added to four heaters with this permit action. Since the heaters are a potential PSD Nested Source, it is especially important that these controls remain in place and that the facility complies with emission limits. **If heater emissions were to increase or the facility added additional heaters, they could exceed the nested PSD source emission threshold.**
O. Condition A206.A Flare Gas Flow Monitoring and Gas Analysis: A line was added into the condition's Monitoring section (1)(a) to explicitly state the two flare SSM streams. This was done in accordance with the AQB flare monitoring protocols.
P. Condition A206.B Flare Emissions Calculations from the previous NSR permit was removed, because it is redundant with Condition A107.E. Melinda agreed that it was unnecessary to have this condition in the permit.
Q. A206.B Flare Flame & Visible Emissions: A requirement to measure opacity during one blow down event per year has been added to this condition. This is per our flare monitoring protocols for facilities with SSM blowdowns.
R. Condition A206.C Flare Construction and Stack Height added to the permit, per flare monitoring protocols for flares that are not yet constructed.
S. Condition A206.D Flare Parametric Monitoring for Low Pressure flaring added to the permit,

per instruction from TV Manager Melinda Owens.

T. Section A208 was changed to "Amine Units and Thermal Oxidizers" and the following conditions were moved from Section A206 in the previous NSR 7877:
    - Condition A208.A Amine Unit Control and Thermal Oxidizer Operation: This condition was in the previous NSR 7877 as A206.D, and it had both opacity requirements as well as control/operational requirements. This condition now contains only the control/operational requirements, and the opacity requirements are in a sperate condition (see next bullet).
    - Condition A208.B Thermal Oxidizer Flame & Visible Emissions condition: This condition contains the opacity requirements that were separated from NSR 7877 Condition A206.D. The opacity requirements were separated into a stand-alone condition in order to match monitoring protocol language. The condition was also revised to allow flexibility of either a piezoelectric lighter or a continuously lit pilot, per applicant request.
    - Condition A208.C: Gas Flow Monitoring and Gas Analysis
    - Condition A208.D: Thermal Oxidizer Emissions Calculations
    - Condition A208.E: Periodic Emissions Testing for TO1-4: NSR 7877 Condition A206.E was for an initial compliance test. Condition A208.E replaces that condition and requires an initial as well as periodic emissions testing. This condition matches monitoring protocol language.

U. Condition A208.F Thermal Oxidizer Control Efficiency: This condition is being added to the permit to ensure the amine units are controlled effectively by the thermal oxidizers. This condition is consistent with other gas processing plant permits.

V. Condition A209.B 40 CFR 60, Subpart OOOOa for compressors: This condition was revised from generic OOOOa language to a compressor-specific condition (with citations specific to compressors)

W. Condition A209.C 40 CFR 60, Subpart OOOOa for amine units: This condition was revised from generic OOOOa language to a condition with citations specific to these amine units.

X. Condition A209.D LDAR program for fugitive emissions: This condition was added so that applicants could reduce their fugitive emission limit by 75% (see Section 15 below, Note E, for more detail).

15.0 Permit specialist's notes to other NSR or Title V permitting staff concerning changes and updates to permit conditions:

A. Haul Roads were included as a unit in Table 2-A, however they are NSR exempt and TV Insignificant so they do not need to be included in the facility's permits.

B. Units GEN 1-4 are NSR exempt, but the applicant has requested they be included in the NSR permit to match the future TV Permit. Inclusion of the operating hours limitation also maintains the PSD minor source status of the facility.

C. Units CRYO1-4 listed in Table 2-A of the permit were not included in this permit, since they are redundant with units AU1-4.

D. The facility location listed on the first page of NSR Permit 7877 was thought to be incorrect and was revised in an admin revision (7877-R1). However, the facility location information provided in this application is slightly different than what was used in 7877-R1. The applicant confirmed via email that what is in the application is correct and should be used in Permit 7877-M1.

E. The fugitive emissions in the original application were calculated using SOCMI emission factors, which AQB does not allow for this type of facility. Bureau Chief Liz Bisbey-Kuehn

approved the fugitives specific to the natural gas processing portion of this facility to be calculated using the emission factors from Table 2-4 of the 1995 EPA guidance, *Protocol for Equipment Leak Emission Estimates* (EPA-453/R-95-017) and then reduced by 75% because the applicant agreed to a more stringent monitoring condition for fugitives (Condition A209D in the permit).

F. Due to revisions to the application (mainly the removal of SOCMI emission factors in fugitive calculations, which caused a significant increase in VOC emissions), the applicant was required to republish their public notice. It was published in the Carlsbad Current-Argus on January 29, 2021. However, once AQB allowed a 75% reduction to the natural gas processing portion of the plant's fugitive emissions, the 1st public notices published by AQB and the applicant reflected the total facility emissions, so Bureau Chief Bisbey-Kuehn requested that the applicant rescind their 2nd public notice via an email to AQB. AQB's public notice had SO2 emissions lower than what was later approved and modeled, however BC Bisbey-Kuehn agreed that the published public notices were sufficient in this regard as well.
G. See Section 6 Public comment/concern for an explanation regarding the delay in permit issuance. The permit deadline was extended due to public comment and hearing request.
H. Although the AQB Monitoring Protocols for boilers/heaters suggest annual frequency could be sufficient for the individual heaters at this facility, the monthly inspection requirement from the previous permit is being maintained due to the number of heaters, the use of control devices, and the fact that these units could be a PSD nested source. This was approved by Major Sources Manager Kirby Olson.

16.0 Permit writer's notes on hazardous air pollutants (HAPs) and toxic air pollutants (TAPs):

The contents of an NSR application, per 20.2.72.403.A(1) NMAC, shall contain the identification of all toxic air pollutants that may be emitted in excess of the screening level (specified in pounds per hour) in 20.2.72.502.NMAC. As a natural gas processing plant, Cowboy CDP is not included in the exemption from TAP permitting found at 20.2.72.402.C(5) NMAC for oil and gas production facilities. All the toxic air pollutants in the Cowboy CDP application were compared to their screening levels in Table A at 20.2.72.502 NMAC as shown in the table below:

TAP name	Table 502 screening level in lbs/hr	Emissions from Cowboy CDP in lbs/hr	Exceeds screening level?
Cyclohexane	70.0	11.11*	no
Sulfuric acid (H_2SO_4)	0.0667	0	no
Ammonia	1.20	0	no

*controlled emissions from truck rack, SSM Cryo flare, OVHD SSM flare, ECD1 combustor, and tanks

None of the emissions of TAPs exceed the screening levels in 20.2.72.502 Table A. No further analysis for TAPs is required under Part 72. In addition, the majority of the emissions of cyclohexane are associated with SSM flaring, and are estimated to occur no more than 40 hours per year.

The facility is required to report the Potential to Emit from any HAP at rate greater than or equal to one ton per year. HAPs are subsets of Volatile Organic Compounds (VOCs) and are typical in the oil and gas sector. The facility is not a major source of HAPs as defined in the regulations.